



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,609	11/20/2003	Donald Scott Johnson	130936-1	3109
6147	7590	04/12/2006	EXAMINER	
GENERAL ELECTRIC COMPANY GLOBAL RESEARCH PATENT DOCKET RM. BLDG. K1-4A59 NISKAYUNA, NY 12309			TRUONG, DUC	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/719,609

Applicant(s)

JOHNSON ET AL.

Examiner

Duc Truong

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-7,11-17,19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4-7, 11-17, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-7, 11-17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cotter et al (4,814,419).

The reference discloses polyarylether sulfone compositions containing recurring units of the formula : -O-E-O-E'- wherein E' is the residuum of 4,4'-dichlorodiphenyl sulfone and E is selected from the group of tetramethylbisphenol A, admixed with up to 50 mole% of a second diphenol such as biphenol (see col. 2, line 60 onto col. 3, line 5) ; and from specific mixtures of 4,4'-biphenol/bisphenol A containing from about 50 to about 90 mole% of 4,4'-biphenol (see col. 3, lines 54-56).

The reference further discloses the use of methyl chloride as chain terminating agent and is used to endcap the polymer (see col. 8, Example 1, lines 62-64).

Further, the reference does disclose in Table 2, the molar ratios of biphenol and bisphenol A can be varied as desired, in that the claimed greater than 65 mole% of biphenol is included in the first two components, and the glass transition temperature is ranging from 190<sup>o</sup>- 220<sup>o</sup>C, overlapping with these in claims 11-12.

Art Unit: 1711

The disclosure of the reference differs from the instant claims in that it does not disclose the claimed characteristics such as min. wt. average MW nor specific chain terminating agent, as in claim 17.

However, the reference does disclose the required reactants and the required molar ratios under cited conditions to form the same or similar products having the claimed glass transition temperature, in that the molar ratios can be varied as desired.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the molar ratios of the reactants from the reference within the limitations of the instant claims to form the products having the claimed characteristics since they have been shown to be effective in a similar system and thus would have been expected to provide adequate results. There is no showing of unexpected results derived from said selection.

Applicant's arguments are based on the use of a biphenol-bisphenol A with specific molar ratio in example 2 (75:25) to show that the wt average MW is well below the claimed range, of 54,000 grams per mole.

It is pointed out to Applicant that the teachings of the reference is not limited to the 75:25 molar ratio but the entire ratios must be considered for what it fairly teaches one of ordinary skill in the art.

In Examples 2, the reference does disclose the molar ratios can be 100: 0, 75: 25, 60:40, 50: 50, 0: 100. Therefore, the claimed range "greater than 65 mole%" falls within from 60-100: 40-0 mole % of biphenol-bisphenol A and to modify the molar range ratios from the reference within the claimed range to have the claimed min. wt average MW is

Art Unit: 1711

the level of ordinary skill in the art and would have been obvious in the absence of a showing of unexpected results derived from said modification.

The experimental datas in the application has been fully considered but they are not persuasive since they are not commensurate in scope with the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Truong whose telephone number is 571-272-1081. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

\*\*\*



DUCTRUONG  
PRIMARY EXAMINER